

**CLAIMS**

1. A reactor system for oxidative conversion of hydrocarbons comprising at least one reactor tube being provided with a plurality of perforations along a wall of the tube and a reaction zone with an active catalyst arranged on tube side and/or shell side of the reactor tube; and a bed of particulate material surrounding the at least one reactor tube, the bed of particulate material being adapted to be fluidised by an oxygen containing atmosphere and to transport heat from the reactor tube.
2. Reactor system of claim 1, wherein the tube is in form of a perforated metallic tube.
3. Reactor system of claim 1, wherein the tube is in form of membrane tube.
4. Reactor system of claim 3, wherein the membrane consists of material being inert with respect to the process.
5. Reactor system of claim 3, wherein the membrane comprises material being catalytic active with respect to the process.